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Setting up data centres

Real Estate Investment Group, June 2024

Data centres are the basis for all the developments and advancements of our time

In the digital age, data centres are an indispensable part of the digital infrastructure. The storage capacity they provide for data and data processing form the basis for companies' competitiveness. This is because both the digitalisation of established services and activities and innovations in the digital field are evolving rapidly. New digital solutions are constantly being developed and implemented in companies to tackle both existing and future social and economic challenges.

There is an ever-increasing need for computing capacity in Germany, Europe and worldwide. That is why capacity will continue to be expanded and new data centres built in the coming years.

Given this high demand and generally good investment returns, data centres are a very attractive class of assets for investors.

At the same time, setting up data centres gives rise to numerous legal issues and challenges. Along with issues of planning and construction and energy law, particular regulatory conditions have to be complied with.

Legislators have acknowledged the climate-related issues due to the enormous energy consumption, as well as the huge importance of the industry as part of the critical infrastructure and the related risk of sabotage, and put appropriate regulations in place.

To successfully set up a data centre taking account of all requirements, all-round legal support and advice is therefore advisable.



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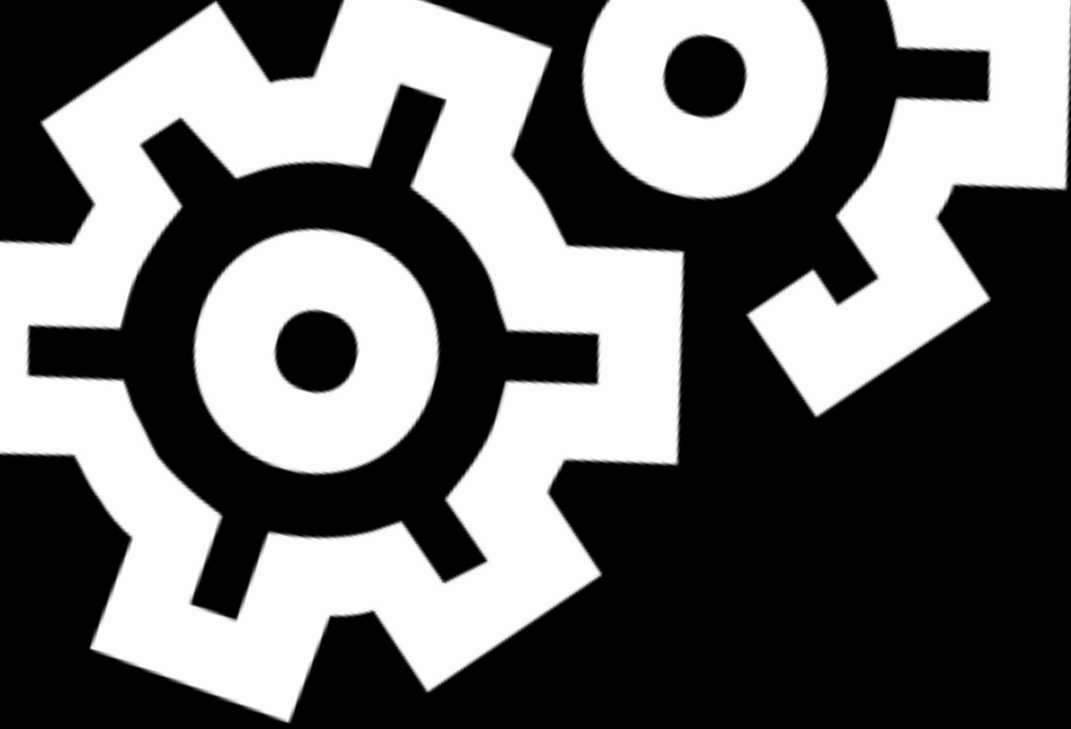
Setting up data centres: Approval processes and project structure

Planning and building data centres firstly involves various **permit requirements under construction law**. Depending on the size and location, a **development plan** (related to the planned construction) may be needed for a new build. **Urban development planning** is the responsibility of the local council and is based on the German Building Code.

When producing the urban development plans, public and private concerns must be integrated, including taking into account environmental protection aspects and the concerns of residents and other stakeholders such as neighbouring councils. The extent to which the revised planning of certain areas is necessary depends on the existing urban development planning and the development of those areas. We recommend approaching the local councils concerned early on to speed up the **planning process** as far as possible.

The building to be erected requires a building permit issued by the relevant building inspection authority according to the applicable **regional building code** based on the existing urban development planning. Even a **change of use** of existing buildings is likely to require a building permit. In addition, there are **permit requirements under water law** for the supply of cooling water which are based on the water resources legislation of the federal government and the federal states.





Data centres are generally equipped with **emergency power generators** to ensure uninterrupted power supply even if the regular power grid fails.

The emergency power generators – unlike the data centre itself – require a licence in accordance with the **German Federal Immission Control Act**, depending on their thermal input. If the rated thermal input is more than 50 MW, such a licence is required. If the **rated thermal input** is between 1 MW and 50 MW, there is no need for a licence, but there are certain obligations under **the 44th German Regulation to Implement the Immission Control Act**.

In general, close **cooperation with the local authority** is recommended in order to play an active role in urban development and to optimally leverage all synergies from the outset, for example with regard to the further use of waste heat.

The long-term authorisation processes, combined with the desire of investors to start construction immediately if a permit is granted, often also require special contractual arrangements for **planning and construction contracts**.

On the one hand, planning generally has to be continued in parallel with the permit process towards readiness for implementation; on the other hand, it may also be necessary to enter into **reservation agreements** or similar in order to secure market capacity, especially for technical components which are long lead items, such as transformers or UPS.

Overall, a sensible and often customised structure for awarding contracts and for the project must be chosen to optimise the overall project duration while limiting implementation risks, particularly in the area of permits.

Energy supply



Challenges and solutions

Since data centres need a large amount of power, **ensuring a secure energy supply** is key for newly planned data centres. To this end, direct supply contracts can be entered into with local or national energy suppliers, known as **power purchase agreements (PPAs)**.

In addition, the sites of future data centres often do not have a direct connection to the high-voltage grid or the power plants/generating facilities to supply it. This can make it necessary to build power lines (sometimes over dozens of kilometres and if necessary, with redundant lines to secure against outages), substations and other energy infrastructure when setting up data centres.

A wide variety of contractual arrangements are conceivable to achieve these investments. These depend essentially on whether the construction client is the data centre operator or the supplier which then passes on the power to the data centre operator as part of a **grid connection contract** or as part of a **construction or project development contract**.

Above all, any **energy supply** sub-project must also be sufficiently interlinked with the **data centre construction** sub-project, both contractually and in terms of project processes, in order to ensure a successful overall project.

From the perspective of public law, such extensive investments in the energy infrastructure may require permits for building **direct lines** between power plants and data centres.

At **regional planning** level, the expansion of the energy supply on a larger scale is particularly important, especially in the form of new power lines and power plants. Due to the general transformation and electrification of industry, regional planning takes place in any case. However, since data centre operators need particularly large amounts of power, they have an explicit interest in an adequate and

conveniently located expansion. They can take an active role in speeding up the process when establishing a site.



Here as well, close co-operation with the relevant authorities is therefore advisable from the start.

With a view to the transition to green energy, but also to special requirements for data centres, (partial) **self-sufficiency by building solar farms** can also be considered in some cases.

Although a building permit is no longer required to erect solar panels on building roofs in most federal states, these can only provide a fraction of the power needed for a data centre.

A building permit is still needed for power plants not connected to buildings. Besides, registration in the **market master data register** is required.

As regards the **feed-in of power** into the general grid, also the German Renewable Energy Act is relevant. This act specifies details of grid connection and feed-in tariffs.

Requirements of the Energy Efficiency Act

Given the huge amount of power data centres need, Germany's recently enacted **Energy Efficiency Act** is especially relevant. For example, data centres have to introduce an energy and environmental management system (section 12) and meet certain energy efficiency and waste heat requirements (section 11).

An energy efficiency register for data centres is also being created, in which the energy consumption and efficiency of data centres will be reported.

Section 16(2) Energy Efficiency Act also specifies the **obligation to reuse waste heat** by measures and techniques to save energy. This includes involving external third parties, too.

According to section 11 of the Energy Efficiency Act, data centres are to be built and operated in such a way that

from
1 January 2024
they cover 50% of their electricity consumption with electricity from renewables

from
1 January 2027
they cover 100% of their electricity consumption with electricity from renewables

from
1 July 2027
they achieve **energy consumption effectiveness of less than or equal to 1.5** on average per year long term

from
1 July 2030
they achieve **energy consumption effectiveness of less than or equal to 1.3** on average per year long term

In addition, section 11(2) Energy Efficiency Act sets out **an obligation to use a proportion of waste heat** (10% from July 2026; 15% for operations starting from 1 July 2027 and 20% for operations starting from July 2028). This obligation does not apply if the data centre operator has an **agreement for waste heat use** with a nearby municipality or the heating network operator which can meet the requirements for proportional use of waste heat within ten years.

This leads to a direct **connection to municipal heat planning** – a topic currently being addressed more often by municipalities and becoming more and more important. We also recommend contacting the municipality directly to effectively leverage these location-related advantages.



Special security regulations for critical infrastructure

According to section 8a(1) of the Act on the Federal Office for Information Security, operators of critical infrastructure are required to protect their infrastructure in a particular manner to avoid disruption to availability, integrity, authenticity and confidentiality. To do so, organisational measures (such as adequate contracts and staff training/monitoring) and technical measures must be taken and evidenced. Failure to comply with the regulations results in a fine (section 14 of the Act).

According to section 5(1) and (3) of the Federal Regulation Defining Critical Infrastructure, critical infrastructure also includes the activities of data centres.

Currently **two new EU Directives** are being transposed into national law. These will greatly expand the requirements placed on data centre operators:

- **Directive (EU) 2022/2555** (NIS2 Directive) provides for stricter risk management measures (such as producing risk analysis concepts) and extensive reporting obligations in the event of security incidents.
- Under **Directive (EU) 2022/2557** (CER Directive), stricter rules on the physical protection of digital infrastructure (such as fencing and admission control to premises) and preventive measures (such as planning for catastrophes) must also be complied with.



Setting up data centres: The advice we offer

We cover all aspects of data centre projects. Across all relevant areas of law. To your utmost satisfaction.

- Structuring data centre projects as projects suitable for investment
- Planning and permit procedures including environmental aspects (such as water law) and coordination with the relevant local authorities
- Land use (purchasing a suitable site) or securing main and ancillary sites (via option agreements, easements etc)
- Leasing to data centre operators
- Synchronising project development with energy projects specifically for data centres
- Grid connection and issues of energy law
- Contracts for planning and construction including structuring the contract award process
- Waste heat usage and energy efficiency
- Security requirements, accountability and reporting obligations



Your contacts



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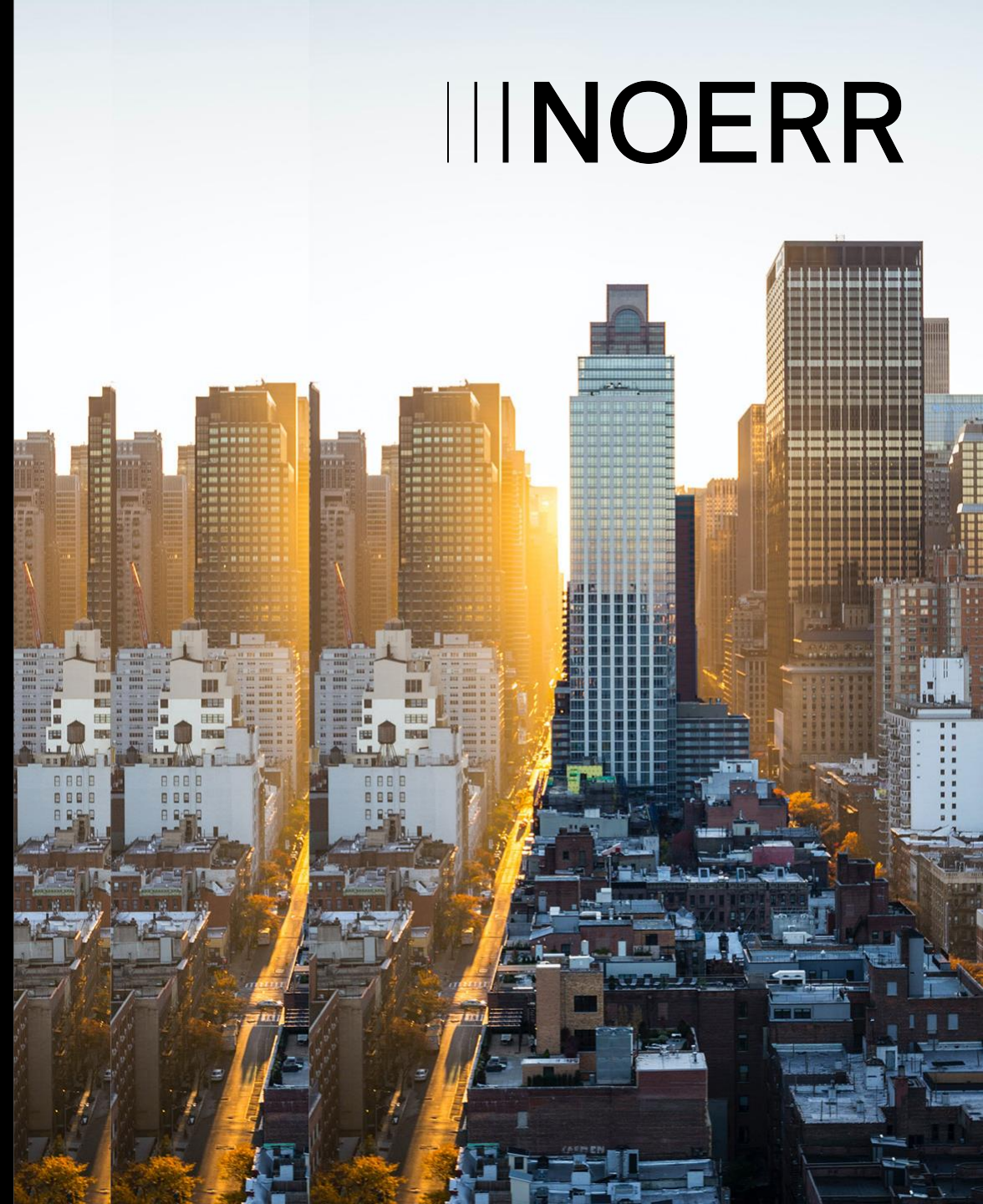
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